ATTACHMENT C

REMARKS

By the present amendment, Applicants have amended the present application so as to direct the claims to the specific sequences of the application and to correct the sequences as directed by the Examiner. In particular, Claims 14 and 16 have been amended to be directed to the specific sequences of the application and to accurately reflect the location of the A domain of the SdrG protein as clearly shown in Figure 5 of the application. Claims 10-13 and 15 have been canceled without prejudice in an effort to expedite the allowance in this case. For reasons as set forth in more detail below, Applicants submit that the present amendments and attachments overcome all prior objections and place this case in condition for allowance.

In the Official Action, the Examiner indicated that Applicants had not complied with the conditions for receiving the benefit of the priority date since such applications "must contain a specific reference to the prior application(s) in the first sentence of the specification. . ." However, it is unclear why the Examiner would make such a statement since the first sentence of the present divisional application indeed contains this very sentence referring to the parent applications. In any event, Applicants have now updated this information by providing the U.S. Patent No. of the parent application, but Applicants submit that the conditions to obtain priority from the parent applications are clearly met.

In the Official Action, the Examiner objected to the claims on the basis of provisional double patenting to pending application Serial No. 10/378,674 in that the Examiner asserted that these claims were not distinct from the present claims. In the

present amendments, Applicants now direct the claims to specific embodiments wherein a specific sequence that is recognized by the antibody utilized in methods of treating or preventing coagulase-negative staphylococcal infection, and these specific sequences differ from those recited in the claims of the '674 patent. Accordingly, this rejection, insofar as applied to the claims as amended, is respectfully traversed and should be withdrawn.

In the Official Action, the Examiner rejected Claims 10-17 under 35 U.S.C. §112 as not fulfilling the written description requirement. In particular, the Examiner pointed out that the claims were drawn to antibodies which recognize the SdrG protein and then provided a long series of arguments (see pages 4-8 of the Official Action) as to why these antibodies were somehow not described in accordance with Section 112. These arguments are respectfully traversed in that the Written Description Guidelines cover this very point and specifically holds that under the present circumstances wherein Applicants have disclosed a specific antigen, disclosed an antibody capable of binding the antigen, disclosed the production of that specific antibody in an example, and have provided a specific assertion of use, that antibody is considered to have been adequately described under 35 U.S.C. §112.

In particular, as set forth in the attached excerpts from the Revised Interim Written Description Guidelines Training Materials (herein "Written Description Guidelines"), there is a specific Example directed to Antibodies which describes whether a claim directed to "an antibody which is capable of binding to antigen X" is considered to be sufficient described under 35 U.S.C. §112. See attached Appendix 1, Written Description Guidelines, Example 16: Antibodies. In this Example, the Applicant's

specification, much like the one in the present application, describes an antigen X which is isolated through a clear protocol, and also discloses an antibody which specifically binds to antigen X. However, in the Example in the Written Description Guidelines, the specification did **not** disclose in an example an antibody which bound to the antigen X. See Written Description Guidelines, page 59.

Nonetheless, the Written Description Guidelines go on to show that the description supporting the claims of "an isolated antibody capable of binding to antigen X" **was** sufficient to meet the Written Description requirement under 35 U.S.C. §112. As the Guidelines conclude under these circumstances:

> **Conclusion:** The disclosure meets the requirement under 35 U.S.C. 112 first paragraph as providing an adequate written description of the claimed invention.

See Written Description Guidelines, p. 60.

In the present case, as the Examiner as conceded, Applicants application described the isolation of specific protein antigens including SdrG (or its A domain), and the application discloses antibodies which specifically bind to these antigens for the purpose of treating or preventing infection. See specification, e.g., at pages 28-31. Moreover, even beyond what is disclosed in the Example of the Written Description Guidelines, the present specification actually describes an example of the production of antibodies from those antigens (see, e.g., Example 2, at pages 49-50). The present application thus provides even **further** support for the antibody in the specification than in the Example in the Written Description Guidelines wherein the antibodies were **not** taught in a specific example.

The reference to the antibodies in the present claims and specification is thus **precisely** what the Written Description Guidelines dictate is adequately described in the specification pursuant to 35 U.S.C. §112. In addition, Applicants have even modified the language of the claims to track the exact language as set forth in the Written Description Guidelines. Accordingly, the Examiner's rejection on the basis of the Written Description requirement is respectfully traversed and should be withdrawn.

In the Official Action, the Examiner rejected Claims 10-17 under 35 U.S.C. §112 as not fulfilling the enablement requirement. In particular, the Examiner argued that one skilled in the art would not be enabled by the present specification because of an alleged lack of disclosure to the use of specific anti-SdrG antibodies in treating or preventing coagulase-negative infections, and an allegation that antibody compositions of this type have not been shown to elicit protective immunity in a reasonable model system. This rejection is respectfully traversed for the reasons that follow.

As an initial point, contrary to the Examiner's arguments, there is indeed very specific disclosure and direction in Applicants' specification which points out that antibodies to the specific Sdr proteins (SdrF, SdrG and SdrH) can be used in methods of treating or preventing staphylococcal infection. This is shown repeatedly in the specification, e.g., at pages 28-38 which disclose the use of SdrF, SdrG and SdrH antibodies in treating staph infection, and which disclose the preparation of compositions for such treatment. See, e.g., the description at page 34 *et. seq.* regarding compositions and methods utilizing, *inter alia*, antibodies capable of binding to SdrG.

Even further, experimental testing in both the pre-clinical and clinical setting has now shown that antibodies capable of binding to SdrG are capable of treating and preventing staph infections in humans and animals. In particular, testing conducted on a composition including antibodies to SdrG was shown to both treat and prevent staphylococcal infections in pre-clinical animal studies, and was also shown to have significant benefits in reducing infections in recent Phase II clinical studies. See attached excerpts from "Update of Veronate", included herein as Appendix 2. Moreover, another inventive group studying antibodies to protein fbe which was asserted to be equivalent to SdrG found that those antibodies could be used to treat or prevent infection cause by *s. epidermidis* . See attached Appendix 3, Rennermalm et al., Infection and Immunity, 72:3081-3083 (May 2004). In short, it is clear that those skilled in the art would be and have been able to practice the claimed invention, and that the Examiner's rejection on the basis of enablement is respectfully traversed.

One additional minor rejection under 35 U.S.C. §112 was with regard to the sequence of Claim 15, and this inadvertent error has now been corrected in the amended claims wherein the corrected sequence is now used in Claim 14.

Finally, in the Official Action, the Examiner rejected Claims 10-17 on the basis of the Doucette-Stamm US Patent 6,380,370 which includes a reference to a sequence having high sequence homology to SdrG, but which does not have any reference to the A domain therein, and which does not specifically disclose actually generating any antibody from that sequence. This rejection, insofar as applied to the claims as amended, is respectfully traversed.

The present claims are directed to the method of treating or preventing a coagulase-negative staphylococcal infection by administering an effective amount of an antibody capable of binding the region corresponding to the A domain of the SdrG protein from amino acids 51 to 598 of SEQ ID NO:10. As indicated above, compositions including such antibodies have now been shown to treating and prevent coagulase-negative staphylococcal infections in humans and animals, and these compositions have been cleared for further clinical testing in Phase III trials. It is clear that no prior reference discloses or suggests the specific use of antibodies capable of recognizing this specific domain in the treatment or prevention of staphylococcal infection.

With regard to the Doucette-Stamm reference cited by the Examiner, this reference is no more than a paper exercise regarding obtaining and disclosing sequences from *Staphylococcus epidermidis* without regard for actually preparing such peptides or polypeptides, generating antibodies, testing for immunogenicity, and determining which ones could even possibly be useful in methods of treatment or protection against staphylococcal infection. As such, it is clear that no proteins were generated nor antibodies raised thereto, and the disclosure is at most an invitation to try to prepare any of thousands of polypeptide sequences with no guidance as to which specific ones should then be used to generate antibodies for use in successful treatment regimens.

Accordingly, in sharp contrast to the presently claimed invention, there is no disclosure or suggestion of specific antibodies to be generated, much less any reference or suggestion as to which of these should be used in specific treatment regimens.

Even further, there is no disclosure or suggestion in the Doucette-Stamm reference with regard to the specific sequence recognized by the antibody of the claimed method, namely the sequence at amino acids 51-598 of the SdrG protein as shown in SEQ ID NO:10. There is clearly no disclosure or suggestion to raise antibodies that are capable of binding to this specific antigen, much less any disclosure or suggestion of use of said antibodies to prevent or treat staphylococcal infection. Accordingly, the Doucette-Stamm reference cited by the Examiner clearly does not anticipate or make obvious Applicants' claimed invention, and the Examiner's rejection on the basis of this reference is respectfully traversed and should be withdrawn.

In light of the amendments and arguments as set forth above, Applicants submit that the present amendment should be entered so as to make the present case allowable, and entrance of the amendment and allowance of this case is earnestly solicited.

END OF REMARKS